

B. AMENDMENTS TO THE CLAIMS

22. (Currently Amended). An exercise device to simulate various types of stepping motions, comprising:

- a frame having a pivot axis defined thereon, the frame configured to be supported on a floor;
- a first and second foot link, each foot link including a first rearward end and a second forward end; a foot supporting portion for receiving the user's feet, the foot supporting portion supported by the first and second foot links, said foot supporting portion sized and positioned on the first and second foot links to receive and support the user's feet while standing, said foot supporting portion having a heel supporting section and a toe supporting section;
- a coupling system associated with the first end of each foot link for coupling the first rearward end of each foot link to the pivot axis so that the first end of each foot link travels in a closed path relative to the pivot axis;
- a guide associated with the frame and operative to engage and direct the second forward ends of the foot links along preselected reciprocating paths of travel at selected inclinations relative to the floor as the first ends of the respective foot links travel along their paths of travel, the guide including a length substantially defining a path of travel for the second ends of the first and second foot links so that when the exercise device is in use and when the second end of one of the foot links travels forwardly from a rearmost position, a heel portion of the user's foot and associated heel supporting section of the foot support initially rises at a faster rate than a toe portion and associated toe supporting section of the foot support thereof, and when the second rearward end of the foot link travels rearwardly from a foremost position, the heel portion of the user's foot and associated heel supporting section of the foot support initially lowers at a faster rate than the toe portion and associated toe supporting section of the foot support, the guide is pivotally coupled to the frame at a first location; and
- an elevation system having an extension which engages the guide at a second location spaced from the first location along a length of the guide, the elevation system being manually operable for selectively changing the inclination relative to the floor of the reciprocating paths of travel of the second ends of the first and second foot links to selectively adjust the angular orientation of the guide relative to the floor, by selectively changing at least one of the elevation and angular orientation of the guide relative to the floor, thereby altering the

31. nominal relative inclination of a heel supporting section of the foot supporting portion relative to
32 a toe supporting section of the foot supporting portion;
33 wherein the elevation system may be selectively coupled to the frame above the
34 floor to alter the elevation of the outward extension and thus the angular orientation of the guide
35 relative to the floor.

1 23. (Canceled) The exercise device according to claim 22, wherein the guide
2 includes a length substantially defining a path of travel for the second ends of the first and
3 second foot links.

1 24. (Canceled) The exercise device according to claim 23, wherein the guide is
2 pivotally coupled to the frame at a first location and the elevation system is operable to engage
3 the guide at a second location spaced from the first location along a length of the guide so as to
4 selectively adjust the angular orientation of the guide relative to the floor.

1 25. (Allowed). An exercise device to simulate various types of stepping motions,
2 comprising:

3 a frame having a pivot axis defined thereon, the frame configured to be supported
4 on a floor;

5 a first and second foot link, each foot link including a first end and a second end;
6 a foot supporting portion for receiving the user's feet, the foot supporting portion supported by
7 the first and second foot links;

8 a coupling system associated with the first end of each foot link for coupling the
9 first end of each foot link to the pivot axis so that the first end of each foot link travels in a closed
10 path relative to the pivot axis;

11 a guide associated with the frame and operative to engage and direct the second
12 ends of the foot links along preselected reciprocating paths of travel at selected inclinations
13 relative to the floor as the first ends of the respective foot links travel along their paths of travel,
14 so that when the exercise device is in use and when the second end of one of the foot links
15 travels forwardly from a rearmost position, a heel portion of the user's foot initially rises at a
16 faster rate than a toe portion thereof, and when the second end of the foot link travels rearwardly

from a foremost position, the heel portion of the user's foot initially lowers at a faster rate than the toe portion; and

an elevation system manually operable for selectively changing the inclination relative to the floor of the reciprocating paths of travel of the second ends of the first and second foot links, by selectively changing at least one of the elevation and angular orientation of the guide relative to the floor, thereby altering the nominal relative inclination of a heel supporting section of the foot supporting portion relative to a toe supporting section of the foot supporting portion;

wherein the guide includes a length substantially defining a path of travel for the second ends of the first and second foot links;

wherein the guide is pivotally coupled to the frame at a first location and the elevation system is operable to engage the guide at a second location spaced from the first location along a length of the guide so as to selectively adjust the angular orientation of the guide relative to the floor;

wherein the elevation system includes an outward extension that engages the guide at the second location; and

wherein the elevation system may be selectively coupled to the frame at a plurality of mounting locations spaced above the floor to alter the elevation of the outward extension and thus the angular orientation of the guide relative to the floor.

26. (Allowed). An exercise device to simulate various types of stepping motions, comprising:

a frame having a pivot axis defined thereon, the frame configured to be supported on a floor;

a first and second foot link, each foot link including a first end and a second end; a foot supporting portion for receiving the user's feet, the foot supporting portion supported by the first and second foot links;

a coupling system associated with the first end of each foot link for coupling the first end of each foot link to the pivot axis so that the first end of each foot link travels in a closed path relative to the pivot axis;

a guide associated with the frame and operative to engage and direct the second ends of the foot links along preselected reciprocating paths of travel at selected inclinations

relative to the floor as the first ends of the respective foot links travel along their paths of travel, so that when the exercise device is in use and when the second end of one of the foot links travels forwardly from a rearmost position, a heel portion of the user's foot initially rises at a faster rate than a toe portion thereof, and when the second end of the foot link travels rearwardly from a foremost position, the heel portion of the user's foot initially lowers at a faster rate than the toe portion;

an elevation system manually operable for selectively changing the inclination relative to the floor of the reciprocating paths of travel of the second ends of the first and second foot links, by selectively changing at least one of the elevation and angular orientation of the guide relative to the floor, thereby altering the nominal relative orientation of a heel supporting section of the foot supporting portion relative to a toe supporting section of the foot supporting portion;

wherein the guide includes a length substantially defining a path of travel for the second ends of the first and second foot links;

wherein the guide is pivotally coupled to the frame at a first location and the elevation system is operable to engage the guide at a second location spaced from the first location along a length of the guide so as to selectively adjust the angular orientation of the guide relative to the floor; and

wherein the elevation system includes an outward extension that is slidably coupled to the frame and which engages the guide at the second location, wherein the outward extension may be selectively slid and coupled to the frame at a plurality of locations to selectively alter the angular orientation of the guide relative to the floor.

27. (Currently amended) The exercise device according to claim 22 ~~23~~, wherein the guide includes a track defining the path of travel of the second ends of the first and second foot links, wherein the second ends of the first and second foot links include an appendage that engages the track.

28. (Previously presented) The exercise device according to claim 27, wherein the appendage includes a roller that rollingly engages the track.

1 29. (Previously presented) The exercise device according to claim 22, wherein the
2 guide includes a support operable to engage and support the first and second foot links at a
3 location spaced from the first ends of the first and second foot links during reciprocating travel.

1 30. (Withdrawn) The exercise device according to claim 29, wherein the guide
2 includes a roller connected to the support for engaging and rollingly supporting the first and
3 second foot links during reciprocating travel.

1 31. (Withdrawn) The exercise device according to claim 29, wherein the guide has a
2 first end pivotally coupled to the frame, wherein the support is coupled to the guide at a location
3 spaced from the first end, wherein the elevation system is operable to adjust the elevation of the
4 support relative to the floor by selectively pivoting the guide about its first end.

1 32. (Withdrawn) The exercise device according to claim 31, wherein the elevation
2 system includes an outward extension for supporting the guide at a location spaced from the first
3 end of the guide, wherein the outward extension is manually positionable between at least a first
4 location wherein the guide is supported at a first inclination and a second location wherein the
5 guide is supported at a second inclination.

1 33. (Withdrawn) The exercise device according to claim 32, wherein the outward
2 extension includes a pin and the frame includes at least a first aperture and a second aperture,
3 wherein the pin is selectively engageable into the first aperture to support the guide at the first
4 inclination and selectively engageable to the second aperture to support the guide at the second
5 inclination.

1 34. (Withdrawn) The exercise device according to claim 29, wherein the support is
2 coupled to a shaft, wherein the elevation of the support relative to the floor is operable to be
3 manually altered by selectively rotating the shaft.

1 35. (Withdrawn) The exercise device according to claim 34, wherein the support is
2 coupled to an internal carriage contained within a sleeve and coupled to the shaft, wherein the
3 rotation of the shaft selectively adjusts the elevation of the internal carriage relative to the floor.

1 36. (Previously presented) The exercise device according to claim 22, wherein the
2 elevation system is operable to adjust the elevation of a first end of the frame relative to an
3 opposite second end of the frame, thereby changing the inclination relative to the floor of the
4 reciprocating paths of travel of the second ends of the first and second foot links.

1 37. (Previously presented) The exercise device according to claim 36, wherein the
2 first end of the frame is located in proximity to the first ends of the first and second links.

1 38. (Previously presented) The exercise device according to claim 36, wherein the
2 first end of the frame is located in proximity to the second ends of the first and second links.

1 39. (Withdrawn) The exercise device according to claim 36, wherein the elevation
2 system interconnects a first location wherein the elevation system is coupled to the frame, and a
3 second location wherein the elevation system is in engagement with the floor, wherein the
4 elevation system is manually operable to selectively vary the distance separating the first
5 location and the second location, thereby changing the inclination relative to the floor of the
6 reciprocating paths of travel of the second ends of the first and second foot links.

1 40. (Withdrawn) The exercise device according to claim 39, wherein the first
2 location is displaced from the second location by a shaft, wherein rotation of the shaft selectively
3 varies the distance separating the first location and the second location, thereby changing the
4 inclination relative to the floor of the reciprocating path of travel of the second ends of the first
5 and second foot links.

1 41. (Withdrawn) The exercise device according to claim 39, wherein the first
2 location is displaced from the second location by a telescoping section comprising a sleeve that
3 is slidably engaged by an inner member, wherein the elevation system is operable to vary the
4 distance by which the first location is spaced from the second location by varying the depth to
5 which the inner member is slidingly engaged within the sleeve.

1 42. (Withdrawn) The exercise device according to claim 22, wherein the first foot
2 link is supported by a first strut having a first end and a second end, wherein the first end of the
3 first foot link is pivotally coupled to the first foot link at a first location, wherein the second end
4 is in engagement with a support surface, wherein the first strut may be pivoted about the first

5 location to alter a distance separating the first foot link from the support surface, thereby
6 selectively changing the inclination relative to the floor of the reciprocating path of travel of the
7 second end of the first foot link.

1 43. (Withdrawn) The exercise device according to claim 42, further comprising a
2 second strut having a first end pivotally coupled to the first foot link at a second location spaced
3 from the first location, wherein the second end of the second strut is coupled to the second end of
4 the first strut.

1 44. (Withdrawn) The exercise device according to claim 43, wherein the distance
2 separating the first and second locations of the first foot link may be selectively varied to
3 selectively change the inclination relative to the floor of the reciprocating path of travel of the
4 second end of the first foot link.

1 45. (Withdrawn) The exercise device according to claim 44, wherein the first foot
2 link further comprises a plurality of spaced-apart apertures, wherein the first end of the first strut
3 is operable to be selectively coupled to the plurality of spaced-apart apertures.

1 46. (Withdrawn) The exercise device according to claim 44, wherein the second end
2 of the first strut further comprises a roller wherein the roller rollingly engages the support surface
3 as the second end of the first foot link scribes the reciprocating path of travel.

1 47. (Currently amended). An exercise device to simulate various types of stepping
2 motions, comprising:

3 a frame having a first end and a second end configured to be supported on a floor;

4 first and second foot links, each foot link having a first end portion and a second end
5 portion;

6 a foot support carried by the first and second foot links for receiving the feet of a user;

7 a coupling system associated with the first end of each foot link for coupling the first end
8 of each foot link to the frame so that the first end of each foot link travels in a closed loop
9 relative to the frame;

10 a guide system for supporting the second end portions of the foot links along a
11 preselected reciprocating path of travel as the first ends of the respective foot links travel along

their loops of travel, the guide including a length substantially defining a path of travel for the second ends of the first and second foot links so that when the exercise device is in use, the foot support moves along a generally elliptical path of travel, the guide being pivotally coupled to the frame at a first location; and

an elevation system operable to engage the guide at a second location spaced from the first location along a length of the guide for manually raising and lowering one of the first end and the second end of the frame, thereby selectively increasing and decreasing the relative elevation of the first end of each foot link relative to the second end of each foot link so as to selectively adjust the angular orientation of the guide relative to the floor, thereby changing the path of travel of the foot support;

the elevation system comprising a manual lift handle to raise and lower the guide relative to the frame.

48. (Allowed). An exercise device to simulate various types of stepping motions, comprising:

a frame having a pivot axis defined thereon, the frame configured to be supported on a floor;

a first and second foot link, each foot link including a first end and a second end; a foot supporting portion for receiving the user's feet, the foot supporting portion supported by the first and second foot links;

a coupling system associated with the first end of each foot link for coupling the first end of each foot link to the pivot axis so that the first end of each foot link travels in a closed path relative to the pivot axis;

a guide associated with the frame and operative to engage and direct the second ends of the foot links along preselected reciprocating paths of travel oriented at an average inclination relative to the floor as the first ends of the respective foot links travel along their paths of travel, so that when the exercise device is in use and when the second end of one of the foot links travels forwardly from a rearmost position, a heel portion of the user's foot initially rises at a faster rate than a toe portion thereof, and when the second end of the foot link travels rearwardly from a foremost position, the heel portion of the user's foot initially lowers at a faster rate than the toe portion; and

19 an elevation system manually operable to selectively increase and decrease the average
20 inclination relative to the floor of the preselected reciprocating paths of travel of the second ends
21 of the foot links by changing the elevation of the guide relative to the floor; said elevation system
22 comprising a manually graspable lift handle to raise and lower the guide relative to the frame
23 and a stop structurally distinct from the lift handle to retain the guide in such raised or lowered
24 position.

1 49. (Previously presented) The exercise device according to claim 22, wherein the
2 path of travel for the second ends of the first and second foot links is linear.

1 50. (Withdrawn) The exercise device according to claim 22, wherein the path of
2 travel for the second ends of the first and second foot links is nonlinear.

1 51. (Previously presented) The exercise device according to claim 23, wherein the
2 path of travel for the second ends is linear.

1 52. (Withdrawn) The exercise device according to claim 30, wherein the roller is
2 fixedly connected to the support at a single location.

1 53. (Withdrawn) The exercise device according to claim 30, wherein the second ends
2 of the first and second foot links travel in a nonlinear path during reciprocal motion of the first
3 and second foot links.

1 54 (Withdrawn) The exercise device according to claim 31, wherein the first end of
2 the guide is pivotally connectable to the frame at a single location.

1 55. (Withdrawn) The exercise device according to claim 34, wherein the second ends
2 of the first and second foot links travel in a nonlinear path during reciprocal motion of the first
3 and second foot links.

1 56. (Withdrawn) The exercise device according to claim 29, wherein the support
2 includes rollers extending laterally outward from the frame, the first and second foot links
3 traveling upon the rollers during their reciprocal travel.